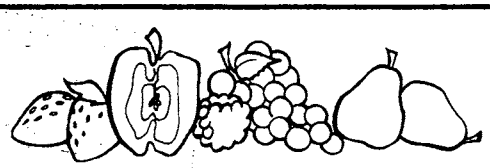
AGRICULTURAL EXTENSION SERVICE · UNIVERSITY OF MINNESOTA

# FRUIT GROWERS' LETTER



December 1979

## MINNESOTA-WISCONSIN APPLE GROWERS ASSOCIATION TO MEET

The joint meeting of the Minnesota-Wisconsin Apple Growers Associations will be held January 9-11, 1980, at the Holiday Inn, LaCrosse, Wisconsin.

Art Jacobson, President of Minnesota Apple Growers Association, has indicated that the principal speakers include Dr. David Ferree, Ohio State University, who will cover two timely subjects, Managing Young and Old Apple Plantings and Summer Pruning. Also, Dr. Donald Elfving will report on Trickle Irrigation and Promising Uses for Growth Regulators.

Other topics include apple marketing practices as well as current national apple regulations and promotional practices.

Registration will begin Wednesday evening, January 9, and continue Thursday morning, January 10. The program is planned for Thursday and will conclude at lunch Friday. An evening banquet is planned on Thursday. Exhibitors will be able to set up Wednesday, January 9.

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## USING COLD STORAGE HEAT

Ever think of using cold storage heat to warm adjacent buildings? A fruit grower in Lockport, New York has. The heat removed from his apple refrigerated storage held at 31°F by the compressor is used to warm a 300 gallon water tank to 180°F. This water in turn is used to heat a space heater in the packing house. The normal oil heating system is used now as a backup unit. A considerable saving in heating cost has resulted. (The Great Lakes Fruit Growers News, August 1979.)

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## VIRUS INFECTED APPLE TREES

During recent years apple trees with and without virus infection have been compared in several trials. The growth of virus-free trees was more vigorous than that of virus-infected trees in all cultivars examined. All trees produced their first yield in the second year after planting, but usually the virus-free trees had the highest yield. Often virus-free trees had the smoothest fruits and the highest mean fruit weight. The more vigorous growth of virus-free trees is considered an improvement for orchards on replant soil because the 'normal' virus-infected trees grow poorly in the early years. However, the growth is too vigorous for orchards on fresh soil so that the planting distances of trees of several cultivars have to be changed accordingly (H.J. VanOosten, Holland).

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## STRAWBERRY ACREAGE IN THE U.S.

Strawberry acreage in the U.S. is around 35,000 acres, with almost 1/3 of the acreage in California. Other important states are Florida, Oregon, Washington and Michigan. Acre yields in California are about 2.6 times greater than in Florida, and about 5 to 7 times greater than in the other states. The value of production per acre in 1979 was $14,250 in California, $7,595 in Florida, $2,763 in Oregon, $2,644 in Michigan, and $1,930 in Washington. Total U.S. value of strawberry production is over $200 million annually (USDA-Crop Reporting Service).

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## APPLE NUTRITION

The incomparable apple contains modest amounts of a number of vitamins and minerals, plus pectin and high quality dietary fiber for proper functioning of the body's digestive and regulatory systems.

Potassium in the apple is significant since it is associated with the very slight sodium content of the apple. This high potassium-low sodium ratio makes the apple a helpful dietary aid for certain cardiac and renal disorders.

Apples play another important role in health care--that of preventive dentistry. The mild fibrous textrue of the apple, its nonadherent consistency and juicy, mouth-watering taste accelerate salivary action and combine to make eating an apple a natural aid for cleansing the teeth. Chewing an apple also exercises the gums, teeth and facial muscles.

Consisting of 85 percent water, apples are for slimming--they fill you up, not out! The average-size apple supplies only about 85 calories, and much of this comes from quick energy-supplying natural sugars.

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## THE FUEL CRISIS AND PICK-YOUR-OWN AND ROADSIDE MARKETS

Are pick-your-own and roadside markets running on full or empty since the fuel crisis? Illinois Extension Specialist J.W. Courter notes good location, accessible roads, and nearness to customers will increase in importance as drivers become more aware of transportation costs. Range of up to 20 to 25 miles one way appears to be acceptable for attracting customers. In Texas, where most markets are far away from cities, a Texas spokesman said fuel shortages adversely affected roadside market patronage this summer (American Fruit Grower).

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## RISING ENERGY PRICES INCREASE FARM PRODUCTION COSTS

Rising energy prices will likely increase farm production costs by 2-3 percent and raise consumer food bills by 4-5 percent above the rate of inflation between 1975 and 1985, according to two USDA economists. In a recently released USDA report, the economists projected that real prices of energy used by U.S. farmers are expected to increase 27-39 percent during the 10-year period, depending upon the energy policy established. However, the report says, successful energy conservation could offset nearly a third of the projected price increases. Energy for producing, processing and marketing food accounts for about 12 percent of the $200 billion consumer bill in the United States. Consumers spend another $11.5 billion in energy costs for food storage, preparation and consumption.

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## APPLE TREE ORIENTATION

Apple tree hedgerows oriented east-west have given higher production than when oriented north-south, according to a 7-year study by A.S. Devyatov and A.V. Gorny, at the Byelorussian Research Institute, Minsk, USSR. An E-W orientation of rows of Antonovka increased yield 90 percent for the Italian palmette hedgerow form, 25 percent for the Delbard cross-arm, 70 percent for the Lapage system, and 51 percent for the Rusine palmette. Highest yields in either orientation were with the Delbard cross-arm. A similar yield increase, but less, occurred with Nesravnennoye. No differences were found in fruit size, quality or chemical composition due to row orientation. Differences in production were associated with better photosynthetic active radiation between 9 a.m. and 3 p.m. in the E-W orientation, especially in the lower part of the tree (Fruit Science Reports (Poland) 5(4), 1978).

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## APPLE TREE TRUNK-HARDINESS

Apple tree trunk-hardiness can be reduced by pruning, stresses D.A. Kollas, fruit extension specialist in Connecticut, in a recent article in Massachusetts Fruit Notes. His suggestions to minimize the risk for New England are: do not prune before Christmas since mild temperatures which can reduce hardiness are likely to occur before then; keep a record of minimum and maximum temperatures beginning November 1, and delay pruning until February if there have been 25 days with minimums of 28°F or lower by December 25; before Christmas do not prune within 10 days following maximums of 55°F or more; leave for late February and March the pruning of all trees that bore an especially heavy crop and those that are weak or had reduced leaf surface for any reason. A mild fall encourages late growth and delays the buildup of tree and trunk hardiness. These are good suggestions for Pennsylvania as well, especially for peaches and young planting which are best pruned after the period of minimum winter temperatures has passed.

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## NEW VARIETY REMINDERS

Keepsake Apple - A good home garden apple with long-term storage capability. The fruits normally mature October 7 to 15 in the Twin Cities and attain peak fresh eating quality December through February with good storage quality still prevalent until late April under refrigerated conditions. The fruit is small to medium-sized,

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irregular with nearly flat sides. The skin is red with some scarf skin and scattered white dots. The stem is short. The flesh is very fine-grained, hard, very crisp, juicy and light yellow in color. A characteristic aromatic flavor predominates in freshly harvested fruit which mellows after one to two months storage. The very long shelf life and storage capability should make this cultivar ideal for home owner storage under less than ideal conditions. 'Keepsake' has been ranked high in sensory evaluation scores for fresh dessert quality and for pie and sauce culinary tests.

Trees of 'Keepsake' are moderately vigorous in growth with a spreading habit of branch structure. They are fully winter hardy in central Minnesota but should not be grown in areas farther north because of the relatively long maturity season of approximately 150 days from bloom. 'Keepsake' is moderately resistant to fire blight and cedar apple rust.

Edelweiss Grape - Developed from a cross of MN #78 x Ontario. This new variety has medium-sized, green berries which are sweet and pleasantly flavored. Edelweiss can perhaps be described as an early-maturing Ontario type of grape which is suitable for planting in the northern states, where maturity and hardiness are important considerations.

The vines are productive, vigorous and disease resistant. They have survived without protection in the Twin Cities area and are considered much hardier than Swenson Red.

Swenson Red - Developed from a cross of MN #78 x Seibel #11803. This new hybrid is particularly valuable for the northern states because of its early maturity and very fine dessert quality. The red berries are med-large sized and firm-textured, resembling a European table grape. At full maturity, which is normally early September in east central Minnesota, these grapes obtain high sugar content (22 percent) and develop a very fine flavor. The clusters are med-large sized and the vines are vigorous and productive. The vines have survived -25°F to -30°F without protection in this area but are not considered hardy enough to grow well without cover at lower temperatures. It can be considered at least as winter hardy as Concord but not as hardy as Beta.

A good quality, distinctive-flavored white wine can be made from juice present without the skins. Fermentation on the skins is not recommended. One weakness is susceptibility to mildew under wet conditions. This can be controlled by spraying.

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## CLEAN, PROTECT PESTICIDE EQUIPMENT FROM RUST

To avoid rust problems with pesticide applicating equipment next spring, farmers should thoroughly clean their machinery this fall.

Clean, check, and if necessary, replace nozzle tips, then store tips, screens and strainers in light oil.

To prevent corrosion in the sprayer body, flush it first with water, then with a solution including 0.5 percent trisodium phosphate or 0.5 percent activated charcoal. For herbicides in water-soluble formulations, use 1-2 percent household ammonia left in the sprayer overnight. For oil solutions, 1¼ cups kerosene with detergent decontaminates the sprayer.

Flush with water again and refill tank with water and light oil. Empty sprayer.

Granular applicators should also be emptied and cleaned to prevent caking, clogging and eventual corrosion. Useful tools include a vacuum cleaner, compressed air and a stiff brush. Wash hopper, agitator and delivery system. Dry completely, and apply a rust inhibitor.

To further prepare for spring, the operator should check engines, batteries, tires, bearings, belts, chain sprockets, hoses and metering devices. Hoses should be laid out straight or coiled in a container to prevent kinking.

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## FUTURE FRUIT MEETINGS

Minnesota-Wisconsin Apple Associations, January 9-11, 1980, Holiday Inn, LaCrosse, Wisconsin.

National Strawberry Conference, February 24-26, 1980, Rodeway Inn, St. Louis, Missouri.

Horticulture Industries Conference, February 25-27, 1980, Earle Brown Center, University of Minnesota, St. Paul, Minnesota.

International Dwarf Fruit Tree Association, February 27-29, 1980, Hilton Center Hotel, Kalamazoo, Michigan.

Minnesota-Wisconsin Apple School, March 5-6, 1980, Midway Motor Lodge, LaCrosse, Wisconsin.

Minnesota Berry School, March 16-17, 1980, Earle Brown Center, University of Minnesota, St. Paul, Minnesota.

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